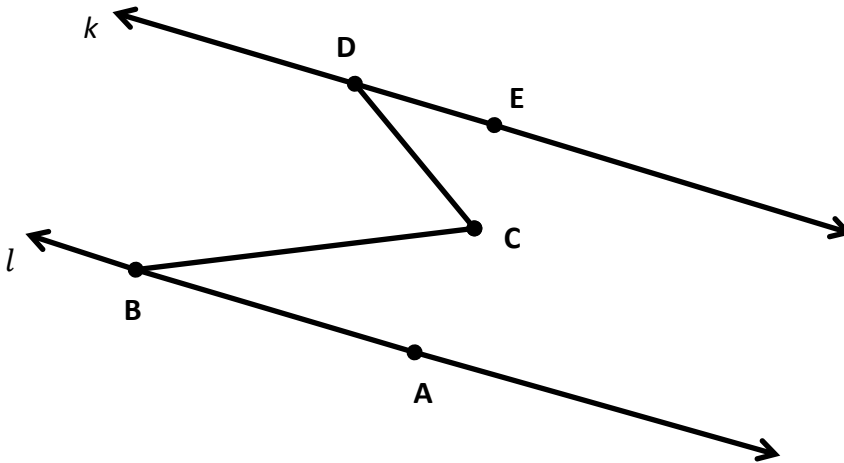


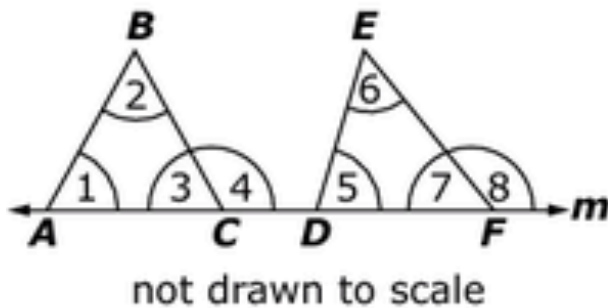
Name _____

Date _____

1. Line $k \parallel$ line l , $\angle EDC = 41^\circ$ and $\angle ABC = 32^\circ$. What is the measure of $\angle BCD$? Explain in detail how you know you are correct. Add additional lines and points as needed for your explanation.

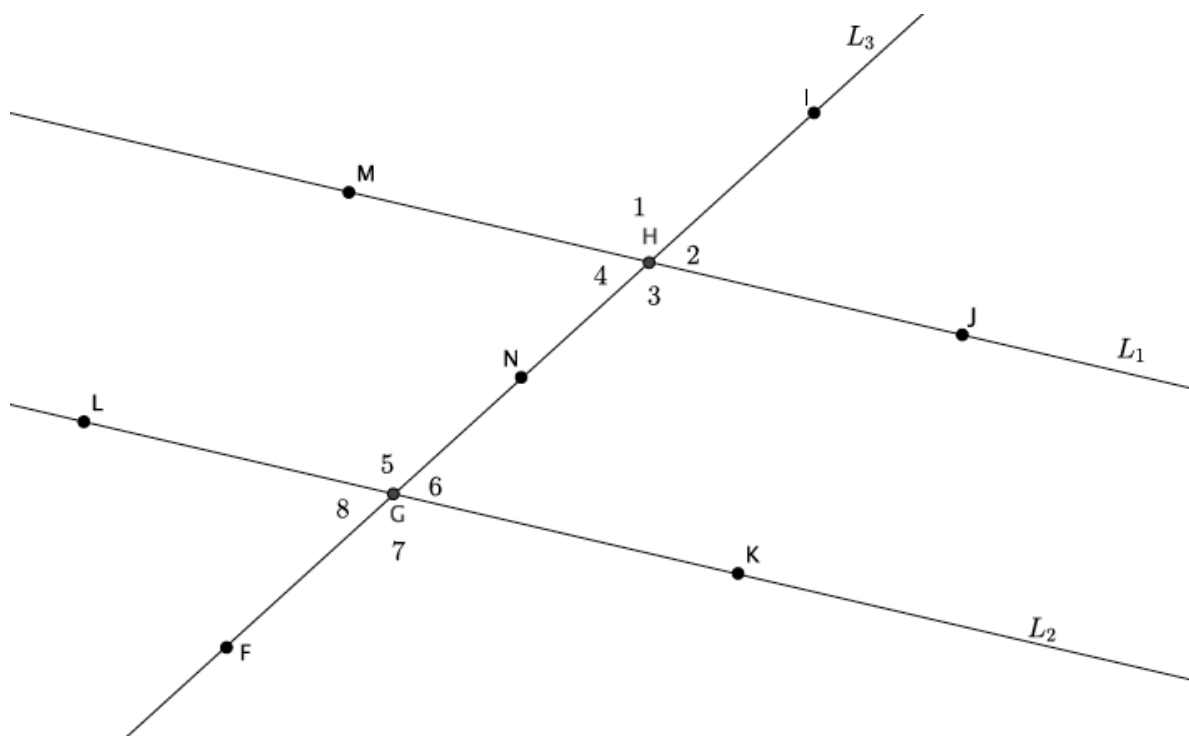


2. The base of triangle ABC and triangle DEF lie on the same line m , as shown in the diagram. The measure of $\angle 4$ is less than the measure of $\angle 8$.



Fill in each blank using $>$, $<$ or $=$ to make the statement true.

- $\angle 3$ _____ $\angle 7$
 - $\angle 5 + \angle 6$ _____ $\angle 8$
 - $\angle 8$ _____ $\angle 1 + \angle 2$
3. Use the diagram below to answer questions that follow. Lines L_1 and L_2 are parallel. Point N is the midpoint of segment \overline{GH} .



- a. If $\angle IHM = 125^\circ$, what is the measure of $\angle IHJ$? $\angle JHN$? $\angle NGK$?

$\angle IHJ$ _____

$\angle JHN$ _____

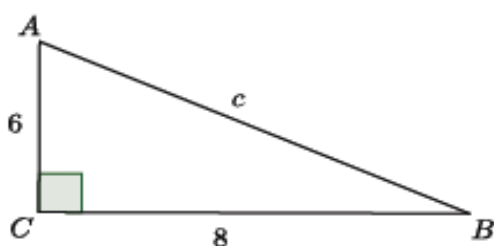
$\angle NGK$ _____

- b. What is the relationship between $\angle 4$ and $\angle 6$? Circle the correct answer(s).

- a) Corresponding Angles
- b) Alternate Interior Angles
- c) Alternate Exterior Angles
- d) Vertical Angles

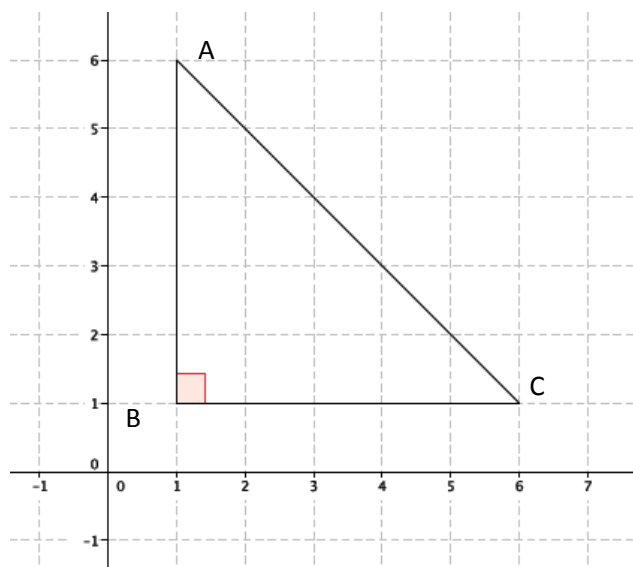
- c. Name a pair of Corresponding Angles.

4. _____ and _____
Determine the length of c in the triangle below. Show your work.



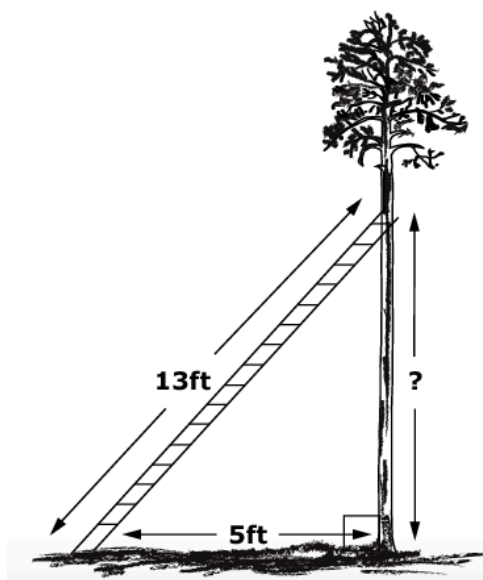
5. Find the length of all three sides of the right triangle shown below. Show your work.

AB _____ BC _____ AC _____



6.

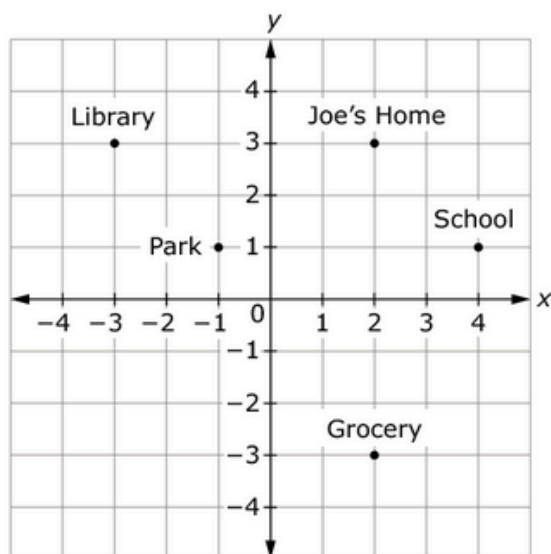
A 13-foot ladder is leaning on a tree. The bottom of the ladder is on the ground at a distance of 5 feet from the base of the tree. The base of the tree and the ground form a right angle as shown.



7.

The points show different locations in Joe's town. Each unit represents 1 mile.

Places in Joe's Town



Enter the shortest distance, in miles, between Joe's home and the park. Round your answer to the nearest tenth.